

Legend:

X = Required (must have in kit at all times)

R = Recommended (likely useful on many assignments)

O = Optional (useful on some assignments)

2-8 Hour Carry Kit

Purpose: To be kept nearby at all times for immediate (within minutes) communication of damage reports during Resource Net Level 1 ops. Also used to remain in contact with Resource Net Level 2 while returning home to retrieve 12-hour Go-Kit.

Items:	
X	2m/70cm dual-band radio HT recommended (min. 5W on 12V/2.5W on batt) Mobile 25W optional (if vehicle will not be far away) Programmed with Resource Net frequencies
X	Charged batteries for 2-3 hours operation
X	2m/70cm dual-band mobile antenna (mag mount, window mount or existing mobile antenna)
X	Current Voice Frequency List
X	Modified Mercalli (Mike-Mike) scale (1-10)
X	Notepad / pens / pencil
R	Cigarette lighter adapter to radios, phone, powerpole
R	Emergency county and city telephone contact list
R	Cell phone
R	Water (16 oz.)

8--12 Hour Go Kit

Purpose: For fully independent operation; unknown environment (heat, cold, wind, rain); unknown time (day, night, up to 12 hours). Return home to retrieve.

Equipment	
Portable Radio Equipment:	
X	2m/70cm dual-band handie-talkie (HT) Minimum 5W on 12V/2.5W on batteries [Note 1] Dual-receive recommended

X	Radio user manual or cheat sheet
X	Earbud or headphones minimum; headset, earbud/ mic, or speaker/mic/earbud, or similar recommended
X	Charged batteries for 12 hours (min. 3000 mAh) [Note 2]
X	Power cord adapters – connect HT to power sources: Powerpoles Cigarette lighter socket Vehicle battery terminals
X	Spare fuses
X	Adapters for mini plugs, RCA plugs, 1/ 4” / 1/8” phone-jack combinations, etc.
X	Coax adapter: connect HT to coax
X	Min. 40 feet of 50 Ohm coaxial cable
R	Small backpack, vest, chest harness or other similar method for carrying HT while operating portable
Mobile or Stationary Radio Equipment:	
R	2m/70cm mobile radio (separate/removable from vehicle) 25W minimum Dual-receive, cross-band repeat
R	Radio user manual or cheat sheet
R	Headset (stereo recommended for VFO per ear) w/ inline, handswitch or footswitch PTT
R	Battery for 12-hours operation (20 Ah min.; 26 Ah rec.)
R	Hf-6M portable/mobile gear with antennas and coax Deep cycle AGM battery or Gel Cell
R	Power cord adapters – connect mobile to power sources: Powerpoles and breakout box Cigarette lighter socket Vehicle battery terminals
R	PowerPole splitter or fused distribution panel
R	Spare fuses
R	Coax adapter: connect mobile radio to coax
R	Min. 40 add'l feet of 50 Ohm coaxial cable w/barrel conn.
R	Extension cord, 3-wire, 3-6 ft., multi-outlet
O	Extension cord, 3-wire, 50-100 ft.

Antennas:	
X	Coax adapters: connect coax to existing antenna jack: BNC plug (male) & BNC socket (female) UHF plug (PL-259) & UHF socket (SO-239) N-type plug (male) and N-type socket (female)
X	2m/70cm dual-band magnetic or window mount antenna
R	2m/70cm high gain HT antenna
R	2m/70cm dual-band portable base antenna (e.g. roll-up J-pole or other)
R	Portable mast (elevates antenna base min. 10 ft.)
R	Tripod or other self-supporting base for mast
R	Window clip antenna mount (for non-metallic vehicles)
Packet Equipment:	
O	Laptop with Outpost and PacFORMS installed
O	USB flash drive (i.e. USB key)
O	TNC (may be hardware, software or built into radio)
O	Cables: TNC to radio; TNC to PC
O	Shade cover for display
O	Portable printer
O	Entire station can operate for min. 1 hr on battery
Other Communications Gear:	
R	Cell phone & charger and/or cigarette lighter adapt.
O	FRS/GMRS Radio and Spare Alkaline Batteries
O	Satellite phone
O	VHF / UHF Scanner with battery power supply or programmed SDR
Tools:	
R	Duct tape or Gaffers tape
R	Electrical tape
R	Nylon Tie-Wraps/wire ties
R	Utility knife
R	Small multi-tool or tool kit
O	Volt-Ohm meter
O	SWR/Power meter/Antenna analyzer
O	Solder station with solder
Operating Position:	

X	Sign(s) for operating position
R	Lighting for operating position
R	Rope or Dacron cord (50')
R	Folding chair
O	Magnetic sign for car
O	Folding table
O	Pop-up Canopy
O	Tarp (8' by 8' or larger)
O	Safety strobes or flares
O	Caution/flagging tape (to mark cables, guy ropes, ...)
O	Safety cones (to mark cable, tripod, ...)
Documentation	
Identification:	
X	CA Driver's license or CA-issued ID card
X	Amateur Radio license
X	County Emergency Responder ID card or MAC badge
X	If issued: ID badge, city badge, MAC Qual card
Maps:	
X	Paper or offline maps covering all Kensington and El Cerrito [Note 3]
X	Compass or GPS
R	Maps & addresses of antenna locations (if available)
R	City, county or other detail maps
Forms and Documentation:	
X	Modified Mercalli (Mike-Mike) scale (1-10) 1 is lowest
X	ICS 205 – Communications Plan (min. 5)
X	ICS 211A – Communications Check-In (min. 5)
X	ICS 213 -- Message (min. 10)
X	ICS 214 -- Unit Activity Log (min. 5)
X	ICS 309 – Communications Log (min. 5)
X	ICS 314 – Windshield Survey (min. 5)
X	Phone message pad (2-part style recommended)
R	County Performance Standards (Required for MACs)
Logging / Note taking:	
X	Clipboard (covered type recommended)

X	Notepads (standard or waterproof)
X	At least 2 pens / pencils
O	Highlighters / felt-tip pens
Contact Lists:	
X	Voice and Packet Frequency Lists
X	DEC/ADEC/EC and city EC telephone contact list
X	Police/Fire direct dial phone numbers
O	Repeater directory
Personal Gear	
Vehicle:	
X	Reliable operating condition
X	Fueled – minimum ½ full at all times
O	Jumper cables, tow bar, winch, chains, flare/torch
General Items:	
X	Money (paper and coin) – in case ATMs are down
X	Watch or clock
R	Trash bags
Personal Safety Gear:	
X	Flashlight or headlamp and spare batteries for 12 hours
X	Safety vest, ANSI standard (lime yellow recommended)
R	First Aid kit
R	Whistle
R	Work gloves
R	Sunglasses
R	Sunscreen lotion
R	Insect Repellent
R	Safety glasses
R	Mask (NIOSH-certified N95 or better)
O	Hearing protection (e.g. foam ear plugs)
O	Hard hat (lime yellow recommended)
O	Chemical light sticks
Clothing:	
X	Sturdy, closed-toe shoes (no sandals)
X	Long pants (no shorts)
X	Hat (broad brim recommended)
X	Seasonal jacket / rain gear
Food & Water:	

X	Food for 12 hours (make your own list)
X	Water for 12 hours (3-4 quarts recommended)
R	Small cooler or ice chest
O	Can opener, utensils, bowl
Toiletries and Personal Items:	
R	Hand soap and/or sanitizer
R	Toilet paper
O	Antacid tablets
O	Prescription medication
O	List of medication used
O	Eyeglasses, contact lens & spare. Magnifying lens
Miscellaneous	
O	Portable AM/FM radio, TV, and spare batteries
O	Binoculars
O	Baggies to seal/protect items
O	Short shovel or sturdy trowel

Extended Go-Kit

Purpose: Additional items for fully independent operation over an extended period of time. Used in situations where returning home after shift is not possible or not ideal.

As Needed or Required	
Power Source:	
-	Regulated DC power supply
-	Battery charger
-	Spare batteries (for charging while operating)
-	12 VDC -to- 120 VAC Power Inverter
-	Solar power system (microcrystalline with charger)
-	Portable generator and fuel (propane preferred)
Clothing:	
-	Rain gear
-	Jacket
-	Warm clothing (preferably in layers)
-	Under garments (3 sets)
-	Socks (3 sets)
-	Pants (3)
-	Belt
-	Shirts (3)
-	Alternate boots or enclosed shoes (steel toed preferred)

-	Sleepwear
-	Cold water laundry soap
Food and Water:	
-	MREs (self-heating) or other non-perishable meals
-	Water (1 gal/day recommended, depending on conditions)
-	Water purification tablets or devices
-	Can opener
-	Cooler or ice chest
-	Thermos
-	Coffee cup
Shower Items:	
-	Washcloth and towel
-	Soap and shampoo
-	Razor and shaving cream
-	Toothbrush and toothpaste
-	Comb and/or brush
-	Deodorant/antiperspirant
-	Wash basin (in case of no sink)
Shelter:	
-	Sleeping pad
-	Sleeping bag/blanket
-	Pillow
-	Blanket
-	Foldup cot
-	Tent

Notes:

The above check lists identifies items that will, or might, be useful to an ARES-RACES or MUT volunteer when they are deployed. It should be clear that some items from each list would be needed in just about any deployment and that others wouldn't be essential. Since each volunteer must determine which items to include in their personal jumpkit to bring on any one deployment, these lists should only be used as a guideline or starting point.

Most recently manufactured hand held radios ARE capable of 5W output when 12-13.8 VDC is connected to the DC-IN jack and at least 2.5W output power using rechargeable battery packs. Check your radio's user manual to be sure your radio outputs at least 2.5W on rechargeable batteries. However, most hand held radios are NOT capable of producing a minimum of 2.5W output power using AA batteries. Some known exceptions are the Kenwood TH-D7 and the Yaesu FT-60. For all other radios, rechargeable battery packs will be needed unless the radio can be shown to have a minimum of 2.5W output on AA batteries (check user manual or test with power meter).

A review of the most popular handheld radios was conducted. Receive current, transmit current and rechargeable battery pack capacity were reviewed. 3000 mAh was determined to be the minimum capacity needed for 12 hours of operation (for example two packs with 1500 mAh batteries each, while some radios may require a little more). Depending on the make and model, this translates to 2 or 3 rechargeable battery packs. This minimum requirement correlates well with real-world experience in drills and real incidents such as Hurricane Katrina.

Background:

About the Deployment Jumpkit Checklist

In most cases, all that is necessary in order to provide disaster communications may be as simple as a vhf/uhf handheld radio, a rubber duck antenna, and a few extra battery packs. However, in a disaster when disaster communications are most needed, please consider that the repeaters may be down, one may be stationed inside a concrete or steel building, and there may be no AC power readily available to recharge batteries. In such circumstances better portable antennas and more extensive power capabilities may be invaluable; hence, a customized "Go-Kit Checklist."

General Considerations:

The contents of the go-kit or jumpkit depends on where one is going, for how long, and what is to be expected. Crucial, besides the radios, are spare batteries as the #1 consideration. Second in importance is a portable antenna (anything is better than a rubber duck). This may be all one needs "normally".

However when a Disaster hits and power, telephone, cable, internet, and cell phones fails, it is too late to attempt to remember in detail in order to assemble an adequate go-kit. It is extremely helpful to have a personalized checklist handy and pre-bagged essential items (a go-kit).

Go-kits should be customized according to the climate, location of the assignment, the nature of the assignment, and probable duration. Again, especially important are a flashlight, fully charged spare battery packs, spare alkaline batteries and packs, and an external antenna. An external antenna (a gain mag mount, a portable J Pole, a portable full wave loop, etc.) will make it possible to operate inside steel concrete

buildings with a hand held, where the rubber duck antenna may not be adequate.

Portable mag mount antennas with a metal ground plane (cookie sheet, sheet metal, or pizza pan) are easy and adequate. Antenna connectors, cables, and adapters for UHF cable (PI259/SO239). Caution: Do not use an SMA to UHF adapter directly on your HT as it will create extra torque and possibly weaken or break your HT's antenna connection. A list should include customized operating aids and personal items

An efficient method is to have four separate bags that all fit inside a single larger knapsack. This makes it far easier to find needed items efficiently. A fifth item would be a cardboard or plastic container to put larger items (coax patch cords, cabling, ground planes, masts, HF equipment, transmission lines, antennas, and similar).

Bag 1 (the power bag):

Power connections with Anderson power pole 12 vdc cables and connectors for all rigs and accessories including bare ends with wire nuts so that transitional splices into other systems can be accomplished. Two or more Spare charged battery packs for one or two dual-band HTs including alkaline battery packs and alkaline batteries. Car chargers and car power adapters for the HTs. It is recommended that all vehicles have not less than a half tank of gas; and the vehicle has a AGM heavy duty marine/car battery with double lugged Anderson power pole cables attached.

Bag 2 (the antenna bag):

This bag has all kinds of adapters for sma male, sma female, uhf (double female/double male), bnc, and N connectors so that interface with existing antennas at the assignment site can be made such as a twinlead J pole roll up portable antenna, a full wave 2 meter delta loop made from rg-58 that is hangable on a wall or suspended from a non-metallic hook or rack, an extended $\frac{1}{2}$ wave or $\frac{5}{8}$ wave rubber duckling, a homemade $\frac{1}{4}$ wave 2M antenna that connects directly on top of the HT, a gain mag mount antenna ($\frac{5}{8}$ wavelength or collinear) and a 2' X 2' sheet metal plate for a ground plane (oven pans, cookie sheets, and pizza pans can also serve the same purpose for the mag mount). 40' of rg8x coax with male UHF connectors on both ends and barrel connectors or similar.

Bag 3 (miscellaneous operating essentials):

Bag three contains the customized go-kit checklist, a clipboard, paper, forms, EMcomm frequency list, repeater list, a copy of the 2m and 70cm band plans, print outs of all memories programmed into the HTs, cheat sheets for the rigs, licenses/credentials, operating aids, cash, glasses, cell phone, cell phone car charger, pens, paper, sharpies, LED flash light and/or lantern (with spare batteries), speaker mics, headsets, assorted spare fuses.

Bag 4 (personal items):

Magnifying glass, glasses/contact lens, raingear, sunscreen, plastic cup, water bottle(s), toothpaste, tooth brush, towel, disinfectants, spare socks, change of clothes, Swiss army knife, plastic fork/knife/spoon, can/bottle opener, duct tape, etc. Similarly, appropriate boots (steel toed best), gloves, sleeping bag, folding chair, folding table, headlight (miners light), hard hat, medicines, prescriptions, first aid kit, battery powered am/fm radio, tools, toilet paper, and other such accoutrements can also be considered depending.

Special considerations (not baggable):

HF rig and antennas, deep cycle battery and cables, HF antennas, antenna tuner, key/keyer, paddle, mast and mast clamps, computer capable of running off of 12vdc, TNC (packet cabling) or substitute SignalinkUsb/Rigblaster (or equivalent) soundcard radio interface with cables, etc. Bulky items can be placed in a rain tight plastic container (or cardboard box).

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